

ER Site No. 35: Vibration Facility Oil Spill (TA-III)

ADS: 1306

Operable Unit: Tech Area III & V

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Site History

During the 1989 Resource Conservation and Recovery Act (RCRA) Facility Assessment, an oil spill reportedly occurred at the Vibration Facility, Building 6560, in TA-III. The Comprehensive Environmental Assessment and Response Program (CEARP) Phase I Installation Assessment conclusion for this site was uncertain and further investigation was needed.

The Vibration Facility is located in the central portion of TA-III, approximately 1 mi (1.6 km) south of the technical area entrance gate. The facility was constructed in several phases between 1956 and 1968. It is used to test the ability of various instruments and equipment to withstand vibrations. The system contained approximately 200 gal of hydraulic fluid in a closed-loop system, meaning the fluid remains in the hydraulic system at all times, never coming in contact with instruments or components of the various tests.

According to interviews with SNL personnel, an unknown quantity of waste hydraulic oil from the shakers in the Vibration Facility was poured onto the ground surface near the southeast corner of Building 6560, adjacent to the old fence line. One interviewee reported that the oil had been absorbed onto Sorbol, a highly absorbent clay, before being deposited on the ground outside the building and that the reported dumping consisted of this non-liquid mixture. The date of this action is not known, but it is believed to have occurred prior to 1970 and to have been less than 15 gal in volume. Another interviewee indicated that the contamination at this site may have been the result of several small oil spills. The oil was believed to be either Dialex or Tellus brand oil; both are nontoxic hydrocarbon-based oils.

The oil-stained soil was reportedly excavated sometime in the late-1970s and moved to a location on the east side of the eastern boundary fence, where it was temporarily stored for an undetermined length of time. Fill material was placed in the original excavated location. The

temporary storage location of the oil-stained soil was reportedly adjacent to the utility pole located near the eastern fence, and from this location it was reportedly removed for disposal by SNL sometime prior to 1987. Prior to construction of the addition to Building 6560, the east fence was moved approximately 30 to 40 ft (9 to 12 m) to the east. The southern part of the original fenceline is under the building addition; however, the utility pole adjacent to the area where the oil-stained soil was reportedly stored is still in its original location.

Constituents of Concern

Mineral-based hydraulic fluid
containing petroleum hydrocarbons Polychlorinated biphenyls (PCBs)

Current Hazards

There are no current hazards at this site related to contamination of the surface or subsurface soils.

Current Status of Work

Surface soil samples were collected and analyzed for total petroleum hydrocarbons (TPH) and PCBs. Some samples indicated elevated TPH levels, so subsurface sampling with a geoprobe was conducted. Results of the geoprobe sampling (to depths of 15 ft below grade) indicated adequate definition of horizontal and vertical extent; no TPH results were in excess of 100 ppm at depth. Soil contamination appeared to be confined to a small area less than 2 ft deep. Data analysis, interpretation, and recommendations for No Further Action (NFA) on this site were presented in the RCRA Facility Investigation (RFI) Report, which was submitted for regulatory approval in July 1996.

Two Notice of Deficiencies (NODs) were received from the New Mexico Environment Department (NMED) for the RFI Report with comments on this site, and a response was submitted to NMED. NMED requested sampling for volatile and semi-volatile organic compounds (VOCs and SVOCs) in the soil.

In 1999 and 2000, samples were taken for VOCs, SVOCs, and PCBs from the surface and subsurface soils. Non-regulated hydraulic oil and low concentrations of detected VOCs were found. Areas of high-TPH soil were removed to below regulatory guidelines established by the New Mexico Oil Conservation Division. Confirmatory soil samples were collected and the levels of detected VOCs and SVOCs were below risk levels. No PCBs were found in the samples.

A supplemental NOD response report documenting the 1999 and 2000 investigations was submitted to NMED in July 2001. An NFA proposal was also included in the report.

On March 5, 2002, NMED found Site 35 to be acceptable for No Further Action (NFA) petition.

Future Work Planned

No further work is planned for the site.

Waste Volume Estimated/Generated

ER removed 8 cubic yards of TPH-contaminated soil to clean up the site.

Information for ER Site 35 was last updated Jan 21, 2003.